

IN THE CLAIMS

1. (Currently amended) A device comprising:

a main encoder for encoding a first portion of a data stream into first frames and a second portion of the data stream into second frames, the second portion following the first portion; and

a redundant encoder for encoding the first portion into first redundant frames that are delayed from the first frames according to a redundant-coding delay having a first value and the second portion into second redundant frames that are delayed from the second frames according to a redundant-coding delay having a second value determined from a detected network performance characteristic different from the first value.

2. (Currently amended) The device of claim 1, further comprising: an adjustable delay for imparting the redundant-coding delay into the first and second redundant frames, the adjustable delay for controlling a value of the redundant-coding delay responsive to a control signal associated with the network performance characteristic.

Claims 3 - 13 (Canceled)

14. (Currently amended) A device comprising:

means for inputting a present value for a redundant-coding delay;

means for encoding a first portion of a data stream into first frames;

means for redundantly encoding the first portion into first redundant frames that are delayed from the first packets according to the present value;

means for determining a network performance parameter after encoding the first portion;

means for determining an updated value for the redundant-coding delay that is different from the present value that corresponds with the network performance parameter;

means for encoding a second portion of the data stream into second frames, the second portion following the first portion; and

means for redundantly encoding the second portion into second redundant frames that are delayed from the second frames according to the updated value.

15. (Currently amended) The device of claim 14, further comprising: a means for setting a minimum threshold for the redundant-coding delay, ~~and~~ wherein the updated value for the redundant-coding delay is maintained not below the minimum.

16. (Currently amended) The device of claim 14, further comprising: a means for setting a maximum threshold for the redundant-coding delay, ~~and~~ wherein the updated value for the redundant-coding delay is maintained not above the maximum.

17. (Currently amended) The device of claim 14, further comprising: a means for receiving a feedback signal through a network, wherein the updated value is determined also from the feedback signal.

18. (Original) The device of claim 14, further comprising:
means for receiving a return stream of packets through a network; and
means for determining a return redundant coding delay of the return stream,
wherein the updated value is determined also from the return redundant coding delay.

19. (Canceled)

20. (Currently amended) The device of claim ~~19-14~~, further comprising: a means for determining an ideal-adapted value of a redundant encoding delay from the performance parameter.

21. (Currently amended) The device of claim ~~19-14~~, wherein the means for determining the performance parameter includes a means for determining an episode length number of one of an episode of consecutively lost packets and an episode of consecutively received packets.

22. (Currently amended) The device of claim 21, wherein the means for determining the performance parameter further includes a means for determining at least one of an average and a variance of the counted episode length number.

23. (Original) The device of claim 21, wherein the episode length number is determined for an episode within a moving time window.

24. (Currently amended) The device of claim 21, further comprising: a means for determining a time difference between consecutive episodes.

Claims 25 - 59 (Canceled)

60. (Currently amended) A method comprising:
inputting a present value for a redundant-coding delay;
encoding a first portion of a data stream into first frames;
redundantly encoding the first portion into first redundant frames that are delayed from the first frames according to the present value;
determining an updated value for the redundant-coding delay ~~that is different from the present value that varies according to a performance parameter~~;
encoding a second portion of the data stream into second frames, the second portion following the first portion; and
redundantly encoding the second portion into second redundant frames that are delayed from the second frames according to the updated value.

61. (Currently amended) The method of claim 60, further comprising: setting a minimum threshold for the redundant-coding delay, ~~and~~ wherein the updated value for the redundant-coding delay is maintained not below the minimum.

62. (Currently amended) The method of claim 60, further comprising: setting a maximum threshold for the redundant-coding delay, ~~and~~ wherein the updated value for the redundant-coding delay is maintained not above the maximum.

63. (Currently amended) The method of claim 60, further comprising: receiving a feedback signal through a network, ~~wherein the updated value is determined also from the feedback signal~~.

64. (Original) The method of claim 60, further comprising:
receiving a return stream of packets through a network; and
determining a return redundant coding delay of the return stream,
~~wherein the updated value is determined also from the return redundant coding delay~~.

65. (Currently amended) The method of claim 60, further comprising: determining at least one performance parameter of the network after encoding the first portion, wherein the updated value is determined also from the performance parameter.

66. (Currently amended) The method of claim 65-60, further comprising: determining an ideal-adapted value of a redundant encoding delay from the performance parameter.

67. (Currently amended) The method of claim 65-60, wherein determining the performance parameter includes determining an episode length number of one of an episode of consecutively lost packets and an episode of consecutively received packets.

68. (Original) The method of claim 67, wherein determining the performance parameter further includes determining at least one of an average and a variance of the counted episode length number.

69. (Original) The method of claim 67, wherein the episode length number is determined for an episode within a moving time window.

70. (Currently amended) The method of claim 67, further comprising: determining a time difference between consecutive episodes.

Claims 71 - 82 (Canceled)

83. (New) A device for encoding voice data in a network comprising:
encoder circuitry that encodes a data stream into primary data frames and associated redundant data frames;
a delay circuit that separately determines individual delay periods for the redundant data frames according to an identified network performance associated with transmission of the primary data frames over the network.

84. (New) The device of claim 83 wherein the primary data frames are transmitted at an evenly spaced constant rate during a communication session and the redundant data frames are transmitted at an irregularly spaced rate according to the individual delay periods determined from transmission of the primary data frames.

85. (New) The device of claim 83 wherein the individual delay periods are determined based on a number of dropped packets during transmission of the primary data frames.

86. (New) The device of claim 83 wherein the individual delay periods are determined based on a duration of time in which packets are delayed or lost during transmission of the primary data frames.

87. (New) A method comprising:

receiving a first portion of a data stream as primary data packets and associated redundant data packets having a transmission delay period;

identifying a data transmission performance characteristic associated with receipt of the first portion of the data stream; and

receiving a second portion of the data stream as primary data packets and associated redundant data packets having an updated transmission delay period according to the data transmission performance characteristic.

88. (New) The method of claim 87 including sending a return stream of packets through a network whereby the updated transmission delay period is determined also from a data transmission performance characteristic associated with the return stream of packets.

89. (New) The method of claim 87 whereby the data transmission performance characteristic is based on an episode length number of one of an episode of consecutively lost packets and an episode length number of consecutively received packets.

90. (New) The method of claim 87 whereby the data transmission performance characteristic is based on a length of time between successfully transmitted primary data packets.

91. (New) A computer-readable medium containing a program for data transmission performance through a packet switched network, the program comprising:

instructions for inputting a present value for a redundant-coding delay;

instructions for encoding a first portion of a data stream into first frames;

instructions for redundantly encoding the first portion into first redundant frames that are delayed from the first frames according to the present value;

instructions for determining an updated value for the redundant-coding delay that varies according to a performance parameter;

instructions for encoding a second portion of the data stream into second frames, the second portion following the first portion; and

instructions for redundantly encoding the second portion into second redundant frames that are delayed from the second frames according to the updated value.

92. (New) The program of claim 91 including instructions for setting a minimum threshold for the redundant-coding delay, wherein the updated value for the redundant-coding delay is maintained not below the minimum.

93. (New) The program of claim 91 including instructions for setting a maximum threshold for the redundant-coding delay, wherein the updated value for the redundant-coding delay is maintained not above the maximum.

94. (New) The program of claim 91 including instructions for receiving a feedback signal through a network, wherein the updated value is determined also from the feedback signal.

95. (New) The program of claim 91, further comprising:
instructions for receiving a return stream of packets through a network; and
instructions for determining a return redundant coding delay of the return stream, wherein the updated value is determined also from the return redundant coding delay.

96. (New) The program of claim 91 including instructions for determining at least one performance parameter of the network after encoding the first portion.

97. (New) The program of claim 91 including instructions for determining an adapted value of a redundant encoding delay from the performance parameter.

98. (New) The program of claim 91, wherein instructions for determining the performance parameter include determining an episode length number of one of an episode of consecutively lost packets and an episode of consecutively received packets.

99. (New) The program of claim 98, wherein instructions for determining the performance parameter further include determining at least one of an average and a variance of the counted episode length number.

100. (New) The program of claim 98, wherein instructions for determining the performance parameter further include determining the episode length number for an episode within a moving time window.

101. (New) The program of claim 91 including instructions for determining a time difference between consecutive episodes.